WHAT IS CLAIMED IS:

1. A computer implemented method of verifying events generated by an agent, said method comprising:

detecting a stimulus at an input of said agent;

determining whether generation of an event by said agent in response to said stimulus is conditional;

creating an expectation of said event based at least in part on said stimulus, wherein said agent is expected to generate said event;

indicating that said expectation is speculative if said generation of said event is conditional, so that said expectation is a speculative expectation.

2. The method of claim 1, wherein said generation of said event is conditional if said stimulus is a response containing an unmodified copy of requested data and other sources accessible by said agent may contain a modified copy of said requested data.

3. The method of claim 1, wherein said generation of said event is conditional if said stimulus comprises a local read request response by a memory local to said agent.

4. The method of claim 1, further comprising determining whether said event is expected based at least in part on said stimulus before creating said expectation of said event.

5. The method of claim 1, further comprising determining whether enough information has been received by said agent to resolve said conditional generation of said event.

6. The method of claim 5, wherein said determining whether enough information has been received comprises determining whether all snoop responses have been received by said agent.

7. The method of claim 1, further comprising converting said speculative expectation to a non-speculative expectation by changing said indication that said expectation is speculative if conditions indicate that said event should be generated by said agent.

8. The method of claim 7, wherein said conditions comprise said agent receiving all expected snoop responses, said expected snoop responses containing no modified data.

9. The method of claim 1, further comprising deleting said speculative expectation if conditions indicate that said event should not be generated by said agent.

10. The method of claim 9, wherein said conditions comprise said agent receiving a snoop response containing modified data.

11. The method of claim 1, further comprising:

detecting said event at an output of said agent; and

checking said expectation to verify whether said agent correctly generated said event.

12. The method of claim 1, further comprising:

detecting an outgoing event at an output of said agent; and

checking a list of expectations of events to verify whether said agent correctly generated said outgoing event.

13. The method of claim 1, wherein said generation of said event is conditional, said method further comprising:

detecting an outgoing event at an output of said agent; and

storing an indication that said outgoing event occurred in said speculative expectation.

14. The method of claim 13, further comprising:

detecting information at said input of said agent indicating that said event corresponding to said speculative expectation should not be generated by said agent; and

signaling an error indicating that said outgoing event should not have occurred.

15. An apparatus for verifying events whose performance by a memory agent is conditional, comprising:

a. at least one computer readable medium; and

b. computer readable program code stored on said at least one computer readable medium, said computer readable program code comprising:

i. program code for reading an input signal at an input of said memory agent;

ii. program code for generating a speculative expectation for an output signal based on

said input signal, wherein said memory agent is expected to generate said output signal if at least one condition is satisfied;

iii. program code for reading at least one additional input signal at said input to determine whether said at least one condition is satisfied; and

iv. program code for promoting said speculative expectation to a non-speculative expectation if said condition is satisfied.

16. The apparatus of claim 15, wherein said input signal comprises a local read response containing an unmodified copy of requested data.

17. The apparatus of claim 15, further comprising program code for deleting said speculative expectation if said condition is not satisfied.

18. The apparatus of claim 17, wherein said condition is not satisfied if said memory agent receives a modified copy of requested data.

19. The apparatus of claim 15, wherein said condition comprises said memory agent receiving all expected snoop responses, none of which contain a modified copy of requested data.

20. An apparatus for testing the operation of a memory agent, comprising:

means for generating a speculative expectation of an event to be conditionally generated by said memory agent;

means for determining whether at least one condition is satisfied indicating that said memory agent should generate said event; and

means for promoting said speculative expectation to a non-speculative expectation if said condition is satisfied.